observed for GM, FEP and LVX. Cross-resistance occurred for CRAB with regards to CAZ, GM, FEP, LVX and AN.

PS 2-314

IMPROVING THE COMPLIANCE TO THE SURGICAL ANTIBIOTIC PROPHYLAXIS (SAP) POLICY OF ADMINISTERING ANTIBIOTIC WITHIN 1 HOUR PRIOR TO SKIN INCISION

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Purpose: This study aims to improve compliance rate to the standard practice of administering prophylactic antibiotics 1 hour prior to skin incisions, which is embodied in our SAP Policy. This will further lead to lower rates of Surgical Site Infections and post operative infections, ensuring patient safety and quality care.
Methods: After extensive discussion of all possible causes, the primary root cause identified was Improper Coordination between members of the healthcare team. Several interventions were implemented:

1. Revision of the pre-existing Pre-Operative Checklist to include the documentation of the antibiotic.
2. Reiteration of the protocol to the healthcare team regarding the SAP through Inter-Office letters.
3. Accomplishment of the monitoring logbook in the operating room to check for the compliance of healthcare team.
4. Administered antibiotics once the whole surgical team is physically present and ready for the operation.
5. The resident on duty in the operating room interpreted the skin test once the patient arrived in the operating room complex.

Results: After intervention implementation, evaluation revealed an increase in the rate of compliance to the SAP Policy of administering antibiotic within 1 hour prior to skin incision from 82% to 95% as of November 15, 2014.

Documented Rate of Compliance to the SAP Policy

Months	Rate of Compliance
June — August 2014	82%
August —September 2014	89%
September —October 2014	95%

Conclusions: There is a 13% increase in the rate of compliance to the Surgical Antibiotic Prophylaxis Policy of administering antibiotic within 1 hour prior to skin incision. This is due to the enhancement in the coordination and communication within the healthcare team.

PS 2-315

REDUCTION OF HOSPITAL LEVOFLOXACIN USE IS ASSOCIATED WITH A DECREASE IN HOSPITAL-ACQUIRED FLUOROQUINOLONE-RESISTANT *PSEUDOMONAS AERUGINOSA* RATES: AN 11 YEAR STUDY

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Purpose: The fluoroquinolone-resistant *Pseudomonas aeruginosa* rates may be related to the consumptions of fluoroquinolones. This objective was to analyze an 11-year surveillance data on the rates of fluoroquinolone resistance in hospital-acquired *P. aeruginosa* before and after implementation of an institution-wide control of levofloxacin use.
Methods: We conducted a retrospective cohort study in a university-affiliated tertiary hospital in Taiwan. To control the increasing hospital-acquired fluoroquinolone-resistant *P. aeruginosa* rates, an intervention program about reducing the use of levofloxacin was implemented by the Department of Infection Control and Pharmacy since July 2007. Fluoroquinolones consumption was expressed as defined daily dose per 1000 patient-days (DDD/1000PDs), We analyzed the relationship between the consumption of ciprofloxacin and levofloxacin and resistance rate of hospital-acquired *P. aeruginosa* every six months by linear regression.
Results: The rates of fluoroquinolone resistance in *P. aeruginosa* (either ciprofloxacin or levofloxacin) increased since 2004. Since the intervention of aggressive control of levofloxacin use in July 2007, the rate of hospital-acquired fluoroquinolone-resistant *P. aeruginosa* continuously decreased, from a mean of 25.30% (before intervention) to 20.90% (after intervention). Parenteral levofloxacin use, total in-hospital levofloxacin use, total in-hospital fluoroquinolone (including ciprofloxacin, levofloxacin, and moxifloxacin) use was significantly positively correlated with resistance of *P. aeruginosa* to fluoroquinolones ($p = 0.005$, $p = 0.008$, $p = 0.011$, respectively). The ciprofloxacin use did not have association with hospital-acquired fluoroquinolone-resistant *P. aeruginosa* rate.
Conclusions: The reduction of levofloxacin use was associated with a significant decrease in hospital-acquired fluoroquinolone-resistant *P. aeruginosa* rate. The sustained control of levofloxacin use kept the low resistant rate in the following six years. We showed the impact of a fluoroquinolone control strategy over 11 years.

PS 2-316

OUTCOMES OF PHARMACY INTERVENTION AT INTENSIVE CARE UNITS OF AN UNIVERSITY HOSPITAL IN TAIWAN

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Purpose: The antibiotic use and prevalence of multidrug-resistant microorganisms (MDROs) significantly increased in intensive care unit (ICU) of an university hospital from 2013. Pharmacy intervention was implemented to optimize antibiotic use since 2014. We want to investigate the outcomes of pharmacy intervention in the ICU.
Methods: Pharmacists participated in the ICU interprofessional patient care and evaluate broad-spectrum antibiotic use from 2014. All drug-related problems (DRPs) were reported via Taiwan patient safety reporting system (TPR) by pharmacists and sent to the chief officer of physician to improve appropriateness of antibiotic use. We compared differences before and after pharmacy intervention include analysis of DRPs, consumption and cost of antibiotics, and prevalence of MDROs. Antibiotic consumption was expressed as number of defined daily doses/1000 bed-days for each month of study. Prevalence of MDROs was also calculated monthly according to non-duplicate samples. Difference of antibiotic consumption and prevalence of MDROs after pharmacy intervention was assessed using independent t test, and correlation was assessed using Pearson's Correlation Coefficient.
Results: Consumption and cost of broad spectrum antibiotics, especially carbapenem, in ICU were decreased significantly after pharmacy intervention implementation (January to July in 2014 vs. January to December in 2013, broad spectrum antibiotics DID: 955 ± 171 vs. 1287 ± 61, $p = 0.042$; broad spectrum antibiotics cost: 983 ± 161 vs. 1539 ± 109 NTD, $p = 0.009$; carbapenem DID: 91 ± 17 vs. 148 ± 7, $p = 0.045$). Consumption of broad spectrum antibiotics and carbapenem correlate with prevalence of MDR-*Acinetobacter baumannii* (MDRAB) (broad spectrum antibiotics vs. MDRAB, $r = 0.603$, $p = 0.006$; carbapenem vs. MDRAB, $r = 0.460$, $p = 0.047$).
Conclusions: Excessive and inappropriate uses of antibiotics have been recognized as a major problem and one reason of high expenditures, as well as increase of drug-resistant microorganisms in Taiwan. Pharmacy intervention may play important role in reduction of antibiotic use and cost, even prevalence of MDROs.

PS 2-317

INVESTIGATION FOR THE CORRELATION BETWEEN MULTI-DRUG RESISTANT (MDR) BACTERIA AND ANTIBIOTICS USED AFTER 4 AND HALF A YEAR SURVEY IN ONE HOSPITAL IN SOUTHERN TAIWAN

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Purpose: Sin Ying Hospital was one Local Community Hospital located in Southern Taiwan. Decreased susceptibilities of some antibiotics for Gram